

AMENDMENTS TO THE CLAIMS

Please cancel claims 5 and 13, amend claims 2, 4, 8-12, 14, 15, 18-21 and add new claims 24-26. No new matter is believed to be introduced by the aforementioned amendments and new claims. The following listing of claims replaces all prior versions and listings of claims in the application.

1. **(Canceled)**

2. **(Currently amended)** An optical add/drop patch cord comprising:
an optical add/drop component disposed in a casing, the optical add/drop component comprising:

an optical substrate;

a first thin film formed on a first end of the optical substrate; and

a second thin film formed on a second end that opposes the first end;

an input fiber permanently coupled to the casing and optically coupled to the optical add/drop component, the input fiber including a connector attached to an end of the input fiber;

a drop fiber permanently coupled to the casing and optically coupled to the optical add/drop component, the drop fiber including a connector attached to an end of the drop fiber;

an add fiber permanently coupled to the casing and optically coupled to the optical add/drop component, the add fiber including a connector attached to an end of the add fiber; and

an output fiber permanently coupled to the casing and optically coupled to the optical add/drop component, the output fiber including a connector attached to an end of the output fiber;

wherein the first thin film is configured to allow at least one wavelength of an optical signal from the input fiber to pass through the first thin film towards the drop fiber while reflecting other wavelength(s) of the optical signal to the second thin film; and

the second thin film is configured to reflect the other wavelength(s) of the optical signal towards the output fiber while allowing at least one wavelength to pass through the thin film from the add fiber towards the output fiber.

3. **(Withdrawn)**

4. **(Currently amended)** The optical add/drop patch cord of claim 2, wherein the input, drop, add and output fibers are coupled to the easing optical add/drop component using solder ferrules.

5. **(Canceled)**

6. **(Previously presented)** The optical add/drop patch cord of claim 2, the optical add/drop component including the collimating elements for ensuring that light is not dispersed within the optical add/drop component.

7. **(Original)** The optical add/drop patch cord of claim 2, the optical substrate including a combination of glass and air.

8. **(Currently amended)** An optical add/drop patch cord comprising:
- a casing;
 - an input fiber secured to the casing, the input fiber including a connector attached to an end of the input fiber;
 - a drop fiber secured to the casing, the drop fiber including a connector attached to an end of the drop fiber;
 - an add fiber secured to the casing, the add fiber including a connector attached to an end of the add fiber;
 - an output fiber secured to the casing, the output fiber including a connector attached to an end of the output fiber; and
- an optical add/drop component disposed in a the casing, the optical add/drop component comprising:
- an optical substrate;
 - a first thin film formed on a first end of the optical substrate; and
 - a second thin film formed on a second end such that the second thin film is opposed to the first thin film;
- an input port optically coupled to the optical substrate and arranged to propagate a multiplexed optical signal towards the first thin film;
 - a drop port optically coupled to the first thin film and arranged to receive at least one wavelength of the multiplexed signal from the first thin film;
 - an add port coupled to the second thin film and arranged to allow at least one wavelength to pass through the add port and into the second thin film; and
 - an output port coupled to the optical substrate and configured to receive signals from the second thin film.

9. **(Currently amended)** The optical add/drop patch cord of claim 8, further comprising wherein:

an ~~the~~ input fiber ~~is~~ permanently ~~secured to the casing~~ secured to the casing ~~coupled to the input port~~ and optically coupled to the ~~input port~~ optical add/drop component;

a ~~the~~ drop fiber ~~is~~ permanently ~~secured to the casing~~ secured to the casing ~~coupled to the output port~~ and optically coupled to the ~~drop port~~ optical add/drop component;

an ~~the~~ add fiber ~~is~~ permanently ~~secured to the casing~~ secured to the casing ~~coupled to the add port~~ and optically coupled to the ~~add port~~ optical add/drop component; and

an ~~the~~ output fiber ~~is~~ permanently ~~secured to the casing~~ secured to the casing ~~coupled to the output port~~ and optically coupled to the ~~output port~~ optical add/drop component.

10. **(Currently amended)** The optical add/drop patch cord of claim 8, further comprising wherein:

an ~~the~~ input fiber ~~is~~ detachably ~~secured to the casing~~ secured to the casing ~~coupled to the input port~~ and optically coupled to ~~the input port of~~ the optical add/drop component;

a ~~the~~ drop fiber ~~is~~ detachably ~~secured to the casing~~ secured to the casing ~~coupled to the output port~~ and optically coupled to the ~~drop port~~ optical add/drop component;

an ~~the~~ add fiber ~~is~~ detachably ~~secured to the casing~~ secured to the casing ~~coupled to the add port~~ and optically coupled to the ~~add port~~ optical add/drop component; and

an ~~the~~ output fiber ~~is~~ detachably ~~secured to the casing~~ secured to the casing ~~coupled to the output port~~ and optically coupled to the ~~output port~~ optical add/drop component.

11. **(Currently amended)** The optical add/drop patch cord of claim 8, further wherein the input port, output port, add port and drop port each comprise a solder ferrule.

12. **(Currently amended)** The optical add/drop patch cord of claim 8 wherein:
 the first thin film is configured to allow at least one wavelength of an optical signal from the input ~~fiber~~ port to pass through the first thin film towards the drop port while reflecting other wavelength(s) of the optical signal to the second thin film; and
 the second thin film is configured to reflect the other wavelength(s) of the optical signal towards the output port while allowing at least one wavelength to pass through the thin film from the add port towards the output port.

13. **(Canceled)**

14. **(Currently amended)** A method for manufacturing an optical add/drop patch cord comprising:

~~attaching a connector to an end of an input fiber;~~
~~attaching a connector to an end of a drop fiber;~~
~~attaching a connector to an end of an add fiber;~~
~~attaching a connector to an end of an output fiber;~~
~~securing each fiber to a casing;~~

enclosing an optical add/drop component in a the casing, the optical add/drop component comprising:

an optical substrate;
a first thin film formed on one end of the substrate; and
a second thin film formed on an end opposing the one end such that the second thin film is opposed to the first thin film;
optically coupling an input port to the optical substrate whereby a signal input at the input port will travel towards the first thin film;
optically coupling a drop port to the optical substrate at the first thin film whereby a signal passing through the first thin film will propagate through the drop port and a signal reflected by the first thin film will be reflected towards the second thin film;
optically coupling an add port to the optical substrate at the second thin film whereby the second thin film is configured to reflect the signals reflected by the first thin film towards an output port and to permit a signal received by the add port to pass through the second thin film towards the output port; and
optically coupling the output port to the optical substrate.

15. **(Currently amended)** The method of claim 14, further comprising:
~~soldering a the input fiber to at least one of the input port;~~
~~soldering the drop fiber to the drop port;~~
~~soldering the add fiber to the add port;~~ and
~~soldering the output fiber to the output port.~~

16. **(Withdrawn)**

17. **(Withdrawn)**

18. **(Currently amended)** The method of claim 14, comprising forming at least one of the first thin film and the second thin film on the optical substrate ~~forming-comprising by a vapor deposition process.~~

19. **(Currently amended)** The method of claim 14, comprising forming at least one of the first thin film and the second thin film on the optical substrate ~~forming-comprising by a film growth process.~~

20. **(Currently amended)** The method of claim 14, further comprising:
~~detachably securing attaching optical fibers to at least one of the input fiber to the casing and optically coupling the input fiber to the input port;~~
~~detachably securing the drop fiber to the casing and optically coupling the drop fiber to the drop port;~~
~~detachably securing the add fiber to the casing and optically coupling the add fiber to the add port;~~ and
~~detachably securing the drop output fiber to the casing and optically coupling the output fiber to the output port.~~

21. **(Currently amended)** The method of claim 14, further comprising:
permanently ~~securing attaching optical fibers to at least one of the input fiber to the casing and optically coupling the input fiber to the input port;~~
~~permanently securing the drop fiber to the casing and optically coupling the drop fiber to the drop port;~~
~~permanently securing the add fiber to the casing and optically coupling the add fiber to the add port;~~ and
~~permanently securing the drop output fiber to the casing and optically coupling the output fiber to the output port.~~

22. **(Withdrawn)**

23. **(Withdrawn)**

24. **(New)** The method of claim 2, wherein each connector is a coupler having a form factor that is substantially compliant with one of the Small Form Factor Multi-Source Agreement (SFF MSA) or the Small Form Factor Pluggable Multi-Source Agreement (SFP MSA).

25. **(New)** The method of claim 8, wherein each connector is a coupler having a form factor that is substantially compliant with one of the Small Form Factor Multi-Source Agreement (SFF MSA) or the Small Form Factor Pluggable Multi-Source Agreement (SFP MSA).

26. **(New)** The method of claim 14, wherein each connector is a coupler having a form factor that is substantially compliant with one of the Small Form Factor Multi-Source Agreement (SFF MSA) or the Small Form Factor Pluggable Multi-Source Agreement (SFP MSA).